

Serial No.: 10/005,483

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Attorney Docket No. 125.003USR1

Title: HIGH DATA SPREAD SPECTRUM TRANSCEIVER AND ASSOCIATED METHODS

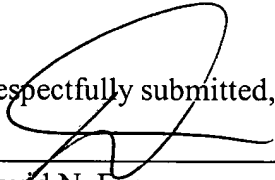
Remarks

Claims 123-126 have been amended and claims 132 and 133 have been added. Claims 1-133 are currently pending. Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. If the Examiner has any questions or concerns regarding this application, please contact the undersigned at (612) 332-4720, ext. 225.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 502432.

Date: October 23, 2002

Respectfully submitted,



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MARKED-UP VERSION OF THE CLAIMS

123. (Amended) A method of generating an rf signal for transmitting binary information in a packet format including a header field followed by a data field, comprising the steps of:

spread spectrum encoding a sequence of first data symbols from said binary information within said header field by combining said first data symbols with a spreading sequence generated at a predetermined chip rate;

encoding a sequence of N-bit second data symbols, where N is greater than 1, from said binary information within said data field by [selecting] generating for each of said N-bit second data symbols one of a set of 2^N chip sequences generated at the same chip rate as said spreading sequence; and

applying the spread-spectrum encoded symbols of said header field and the selected chip sequences of said data field to the I and Q inputs of a phase shift modulator to produce said rf signal.

124. (Amended) The method of claim 123 wherein each said chip sequence is [selected] generated by selecting an initial chip sequence in accordance with a first data segment of an N-bit second data symbol and [is] differentially phase encod[ed]ing said initial chip sequence in accordance with a second data segment of the same N-bit second data symbol.

125. (Amended) A method of generating an rf signal for transmitting binary information in a packet format including a header field followed by a data field, comprising the steps of:

spread spectrum encoding a sequence of first data symbols from said binary information within said header field by combining said first data symbols with a spreading sequence;

encoding a sequence of N-bit second data symbols, where N is greater than 1, from said binary information within said data field by [selecting] generating for each of

said N-bit second data symbols one of a set of 2^N chip sequences, each of said [selected] chip sequences being differentially phase encoded;

applying a reference phase based on encoding of the last of said first data symbols to the differential encoding of the first selected chip sequence; and

inputting said encoded symbols of said header field and said differentially encoded chip sequences of said data field to the I and Q inputs of a phase shift modulator to produce said rf signal.

126. (Amended) The method of claim 125 wherein each said chip sequence is [selected] generated by selecting an initial chip sequence in accordance with a first data segment of an N-bit second data symbol and [is] differentially phase encod[ed]ing said initial chip sequence in accordance with a second data segment of the same N-bit second data symbol.